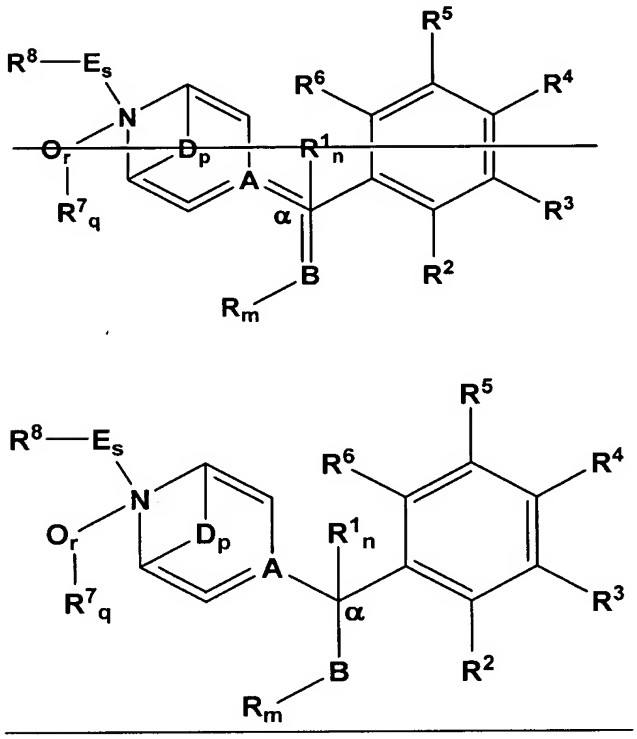
Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A compound of Formula I:



wherein;

~~m, n, q, r, and s are independently selected from 0 or 1;~~ m=1, n=1, q=0, s=1, r=0 or 1, and p is 0~~, 1, 2, or 3~~;

A is selected from C and CH, forming a six-membered azine ring selected from piperidine, 1,4-dihydropyridine, and 1,2,5,6-tetrahydropyridine;

R^2, R^3, R^4, R^5, and R^6 are independently selected from hydrogen. halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, pentahalothio, alkylthio, cyano, nitro, alkylcarbonyl, alkoxycarbonyl, aryl, or aryloxy, provided that at least one of R^2, R^3, R^4, R^5, and R^6 are

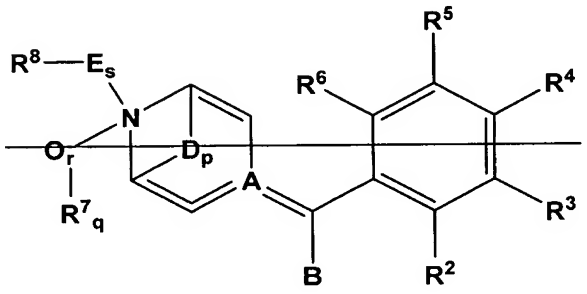
other than hydrogen; and either of R^2 and R^3, or R^3 and R^4 may be taken together with -OCF_2O-, -OCF_2CF_2-, C_2F_2CO-, or -CH=CHCH=CH- , forming a benzo-fused ring;

~~and when,~~ where

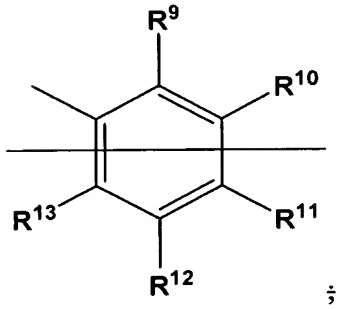
~~(a) m and n are 0;~~

~~a double bond between methyl carbon (a) and the 4 position of the six membered azine ring is formed,~~

~~where~~



~~B is phenyl substituted with R^9, R10, R^{11}, R^{12}, and R^{13};~~



;

~~where~~

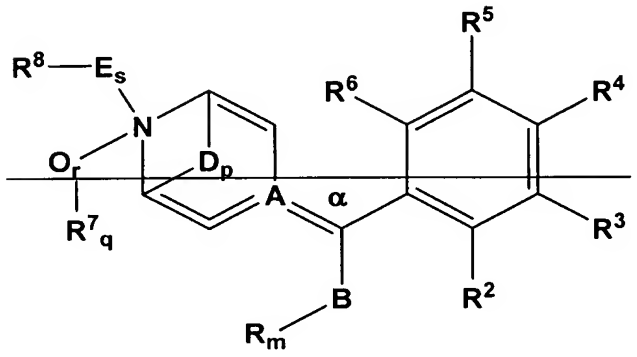
~~R^9, R^{10}, R^{11}, R^{12}, and R^{13} are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, mercapto, and alkylthio, cyano, alkylcarbonyl, alkoxycarbonyl, or aryloxy; and, wherein either of R^9 and R^{10}, or R^{10} and R^{11} may be~~

~~taken together with $-OCF_2O-$, $-OCF_2CF_2-$, or $-CF_2CF_2O-$, forming a benzo-fused ring, and;~~

~~and when~~

~~(b) m is 1, and n is 0;~~

~~a double bond between methyl carbon (a) and the 4-position of the six-ntembered-azine ring is formed,~~



~~where~~

~~B is a bridging group from methyl carbon (a) to R;~~

~~where~~

~~B is selected from O, S, $*CH_2O$, $*OCH_2$, OC(=O)O, $*OC(=0)NR^{15}$, $*NR^{15}C(=O)O$, $*OC(=S)NR^5$, $*NR^{15}C(=S)O$, $*OCH_2C(=O)NR$, $*NR^{15}C(=O)CH_2O$, $*CH_2OC(=O)NR^{15}$, $*NR^{15}C(=O)OCH_2$, $*NR^{15}CH_2$, $*CH_2NR^{15}$, $*NR^{15}C(=O)$, $*C(=O)NR^{15}$, $*NR^{15}SO_2$, $*SO2NR^{15}$, $*NR^{15}NHSO_2$, $*SO_2NHNR^{15}$, $*OC(=O)NR^{15}SO_2$, $*SO_2NR^{15}C(=O)O$, $*OC(=O)NR^{15}CHR^{16}$, $*CHR^{16}NR^{15}C(=O)O$, $*NR^{15}C(=O)NR^{16}$; 1,4-dioxycyclohexyl, or 4-oxypiperidin-1-yl, where the asterisk denotes attachment to the methyl carbon (a);~~

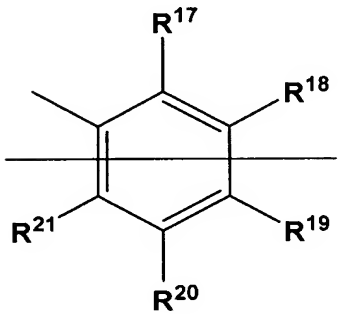
~~where~~

~~R^{15} and R^{16} are independently selected from hydrogen, alkyl, alkylaminocarbonyl, and arylcarbonyl wherein the aryl is optionally substituted with halogen, alkyl, alkoxy, haloalkyl, haloalkoxy, or nitro;~~

~~where~~

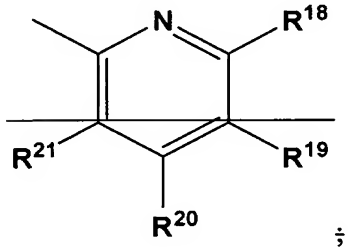
~~R is alkyl, cycloalkyl, alkenyl, or alkoxycarbonyl; or~~

~~R is phenyl substituted with R^{17}, R^{18}, R^{19}, R^{20}, and R^{21};~~



~~or,~~

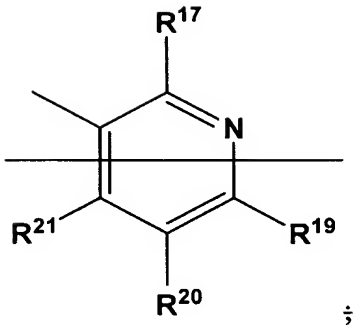
~~R is pyrid-2-yl substituted with R^{18}, R^{19}, R^{20}, and R^{21};~~



~~;~~

~~or~~

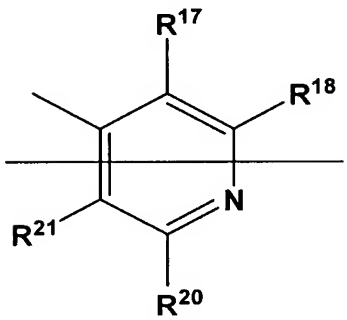
~~pyrid-3-yl substituted willi R^{17}, R^{19}, R^{20}, and R^{21};~~



;

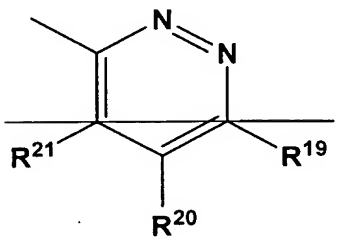
~~or~~

~~pyrid-4-yl substituted with R^{17}, R^{18}, R^{20}, and R^{21};~~



~~or~~

~~pyridazin-3-yl substituted with R^{19}, R^{20} and R^{21};~~



~~where~~

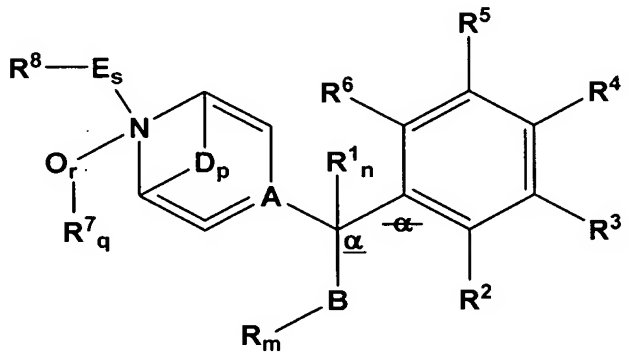
~~R^{17}, R^{18}, R^{19}, R^{20}, and R^{21}, are independently selected from hydrogen, halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, cyano, nitro, alky-Icarhonyl. alkoxycarbonyl, alkoxycarhonylamino, aryl, aryloxy, and 2-alkyl-2H-tetrazole, and,~~

~~wherein either of R^{17} and R^{18}, or R^{18} and R^{19} may be taken together with $-CH_2CH=CHCH_2-$, $-OCF_2O-$, or $-CF_2CF_2O-$, to form a benzofiused ring;~~

~~and when~~

~~(c) m and n are 1;~~

a single bond between methyl carbon ~~(a)~~ α and the 4-position of the six-membered azine ring is formed;



B is a bridging group from methyl carbon ~~(a)~~ α to R;

where

B is selected from O, ~~S, $*CH_2O$,~~ $*OCH_2$, ~~$OC(=O)O$,~~ $*OC(=O)NR^{15}$, ~~$*NR^{15}C(=O)O$, $*OC(=S)NR1^{15}$, $*NR^{15}C(=S)O$, $*OCH_2C(=O)NR^{15}$, $*NR^{15}C(=O)CH_2O$, $*CH_2OC(=O)NR^{15}$, $*NR^{15}C(=O)OCH_2$, $*NR^{15}CH_2$, $*CH_2NR^{15}$, $*NR^{15}C(=O)$. $*C(=O)NR^{15}$, $*NR^{15}SO_2$, $*SO_2NR^{15}$, $*NR^{15}NHSO_2$, $*SO_2NHNR^{15}$, $*OC(=O)NR^{15}SO_2$, $*SO_2NR^{15}C(=O)O$, $*OC(=O)NR^{15}CHR^{16}$, $*CHR^{16}NR^{15}C(=O)O$, $*NR^{15}C(=O)NR^{16}$; 1,4-dioxycyclohexyl, or 4-oxypiperidin-1-yl,~~ where the asterisk denotes attachment to the methyl carbon ~~(a)~~ α; where R^{15} is H ~~and R^{16} are described above~~;

and,

~~R is alkyl, cycloalkyl, alkenyl, or alkoxycarbonyl;~~

~~or~~

R is phenyl substituted with R^{17}, R^{18}, R^{19}, R^{20}, and R^{21}; pyrid-2-yl substituted with R^{18}, R^{19}, R^{20}, and R^{21}; pyrid-3-yl substituted with R^{17}, R^{19}, R^{20}, and R^{21}; pyrid-4-yl substituted with R^{17}, R^{18}, R^{20}, and R^{21}; or pyridazin-3-yl substituted with R^{19}, R^{20}, and R^{21}; where R^{17}, R^{18}, R^{19}, R^{20}, and R^{21} are described above;

R^1 is ~~selected from~~ hydrogen, ~~alkyl, alkoxyalkyl, or aryl;~~

~~when p is 1, 2, or 3;~~

~~D is $-CH_2-$, and an azabicyclo derivative of the six-membered azine ring is formed;~~

when q is 0, and r is 1, an N-oxide derivative of the six-membered azine ring nitrogen is formed;

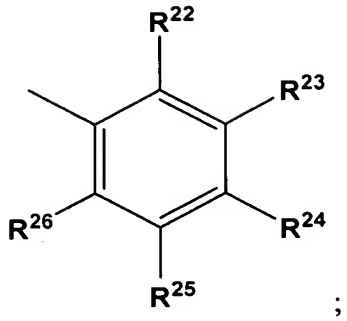
~~when q is 1 and r is 0 or 1;~~

~~R^7 is selected from alkyl, haloalkyl, hydroxyalkyl, alkoxyalkyl, dialkylaminoalkyl, alkylaminocarbonyloxyalkyl, alkylthioalkyl, alkylsulfonylalkyl, alkylcarbonyloxyalkyl, alkoxycarbonylalkyl, carboxyalkyl, arylalkyl, arylcarbonyl, sulfonato, or sulfonatoalkyl, and may bear a negative charge resulting in an inner salt; and a separate ion is chloride, bromide, iodide, or an alkyl or phenyl sulfate or sulfonate; when s is 0 or 1;~~

~~R^8 is selected from hydrogen, alkyl, cycloalkyl, cycloalkylalkyl, alkoxy, alkoxyalkyl, amino, morpholinyl, optionally substituted indolyl, piperidinyl, optionally substituted (pyridyl)alkenyl, optionally substituted 1,2,3,4-tetrahydronaphthylenyl, optionally substituted arylpyrazolyl, benzo[b]thiophenyl, 5-hydropyridino[1, 2a]pyrimidinonyl, optionally substituted 4-hydro-1.3-thiazolino[3,2a]pyrimidinonyl, 1,2,3,4-tetrahydroquinolinyl, 2-thioxo-1,3-dihydroquinazolinonyl, 1.3-dihydroquinazolindionyl, or benzo[c]azolindionyl, wherein the optional substituent is selected from halogen, alkyl, alkoxy, and nitro;~~

~~or~~

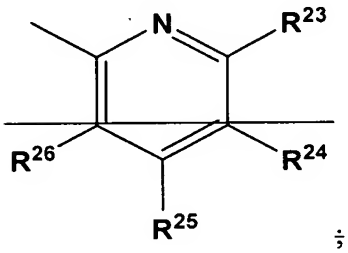
R^8 is phenyl substituted with R^{22}, R^{23}, R^{24}, R^{25}, and R^{26},



;

~~or~~

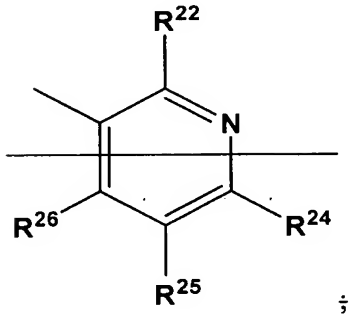
~~pyrid-2-yl substituted with R^{23}, R^{24}, R^{25}, and R^{26};~~



;

~~or~~

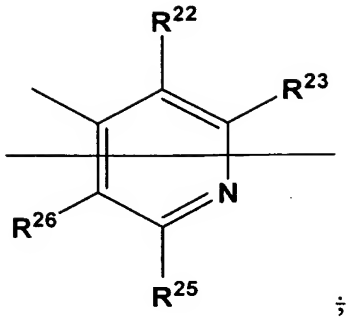
~~pyrid-3-yl substituted with R^{22}, R^{24}, R^{25}, and R^{26}~~



;

~~or~~

~~pyrid4-yl substituted wito R^{22}, R^{23}, R^{25}, and R^{26};~~



where

R^{22}, R^{23}, R^{24}, R^{25}, and R^{26} are independently selected from hydrogen, halogen, alkyl, hydroxy, alkoxy, alkoxyalkyl, dialkoxyalkyl, trialkoxyalkyl, alkoxyiminoalkyl, alkenyloxyiminoalkyl, alkynyloxyiminoalkyl, cycloalkylalkoxy, alkoxyalkoxy, alkylthio, dithioalkoxyalkyl, trithioalkoxyalkyl, alkylsulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cycloalkylaminosulfonyl, alkenyloxy, alkynyloxy, haloalkenyloxy, alkylsulfonyloxy, optionally substituted arylalkoxy, cyano, nitro, amino, alkylamino, alkylcarbonylamino, alkoxycarbonylamino, alkenyloxycarbonylamino, alkynyloxycarbonylamino, haloalkylcarbonylamino, alkoxyalkoxycarhonylamino, (alkyl)(alkoxycarbony-1)amino, alkylsulfonylamino, optionally substituted (heteroaryl)(alkoxycarbonyl)amino, optionally substituted arylcarbonylamino, formyl, optionally substituted 1,3-dioxolan-2-yl, optionally substituted 1,3-dioxan-2yl, optionally substituted 1,3-oxazolidin-2-yl, optionally substituted 1,3-oxazaperhydroin-2-yl, optionally substituted 1,3-dithiolan-2-yl, optionally substituted 1,3-dithian 2-yl, alkoxycarbonyl, alkylaminocarbonyloxy, alkylaminocarbonylamino, dialkylaminocarbonylamino, alkylamino(thiocarbonyl)amino, dialkylphosphoroureidyl, optionally substituted thienyl, optionally substituted 1,3-thiazolylalkoxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted aryloxyalkyl, optionally substituted arylaminocarbonyloxy, optionally substituted heteroaryl, optionally substituted heteroaryloxy, optionally substituted pyrrolyl, optionally substituted pyrazolyl, optionally substituted pyrazinyloxy, optionally substituted 1,3-oxazolinyl, optionally substituted 1,3-oxazolinyloxy, optionally substituted 1,3-oxazolinylamino, optionally substituted 1,2,4-triazolyl, optionally substituted

1,2,3-thiadiazolyl. optionally substituted 1,2,5-thiadiazolyl, optionally substituted 1,2,5-thiadiazolyloxy, optionally substituted 2H-tetrazolyl, optionally substituted pyridyl, optionally substituted pyridyloxy, optionally substituted pyridylamino, optionally substituted pyrimidinyl, optionally substituted pyrimidinyloxy, optionally substituted 3,4,5,6-tetrahydropyrimidinyloxy, optionally substituted pyridazinyloxy, or optionally substituted 1,2,3,4-tetrahydronaphthalenyl, wherein the optional substituent is selected from one or more of halogen, alkyl, haloalkyl, alkoxy, dialkoxyalkyl, dithioalkoxyalkyl, cyano, nitro, amino, or alkoxycarbonylamino, provided that at least one of R^{22}, R^{23}, R^{24}, R^{25}, and R^{26} is other than hydrogen;

when s is 1;

E is a bridging group selected from $(CR^{27}R^{26})_x$-$(CR^{29}R^{30})_y$-, ~~$(CR^{27}R^{21})_x$-$(CR^{29}R^{30})_y$O*, C_3H_6, C_4H_8, C(=O), C(=O)C_2H*, C_2H_4C(=O)*, C_3H_6C(=O)*. C_4H_5NHC(=O)*, or C(=S)NH*, where the asterisk denotes attachment at R^8,~~

where

x is 1; y is 0, ~~or 1;~~

and,

where R^{27}, R^{28}, R^{29}, and R^{30} are independently selected from hydrogen, alkyl, and aryl optionally substituted with alkoxy;

N-oxides;

and

agriculturally-acceptable salts thereof.

2. (original) A compound of claim 1, wherein p and q are 0, r is 0 or 1; and s is 1; R^2, R^3, R^4, R^5 and R^6 are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, pentahalothio, alkylthio, nitro, aryl and aryloxy;

E is the bridging group $-(CR^{27}R^{28})_x-(CR^{29}R^{30})_y-$, where x is 1 and y is 0, R^{27} and R^{28} are hydrogen; and R^8 is phenyl substituted with R^{22}, R^{23}, R^{25}, and R^{26}, where R^{22}, R^{23}, R^{25}, and R^{26} are independently selected from hydrogen, alkoxy, dialkoxyalkyl, dithioalkoxyalkyl, alkoxyiminoalkyl, alkenyloxyiminoalkyl, alkynyloxyiminoalkyl, alkoxycarbonylamino, optionally substituted arylcarbonylamino, alkoxycarbonyl, alkylaminocarbonyloxy, optionally substituted 1,3-dioxolane-2-yl, optionally substituted 1,3-dioxan-2yl, optionally substituted 1,3-dithiolan-2-yl, optionally substituted 1,3-dithian-2-yl, optionally substituted aryl, optionally substituted aryloxy, optionally substituted 2H-tetrazole, optionally substituted pyridyl, optionally substituted pyridyloxy, optionally substituted pyrimidinyl, optionally substituted pyrimidinyloxy, and optionally substituted pyridazinyloxy.

Claims 3-8 (cancelled)

9. (currently amended) A compound of claim 2, wherein A is CH, forming said piperidine ring;

~~(c)~~ m and n are 1, forming a single bond between methyl carbon ~~(a)~~ α and the 4-position of said rings;

R^1 is hydrogen;

B is said bridging group selected from O[[,]] and *OC(=O)NR^{15}, where R^{15} is hydrogen;

and

R is phenyl substituted with R^{17}, R^{18}, R^{19}, R^{20}, and R^{21} where R^{17}, R^{18}, R^{19}, R^{20}, and R^{21} are independently selected from hydrogen, halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, nitro, aryl, aryloxy, and 2-alkyl-2H-tetrazole.

10. (original) A compound of claim 9, wherein R^2, R^3, R^4, R^5, and R^6 are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy; and R^{22}, R^{23}, R^{24}, R^{25} and R^{26} are independently selected from hydrogen, dialkoxyalkyl, dithioalkoxyalkyl, alkoxyiminoalkyl, alkylaminocarbonyloxy, optionally substituted 1,3-dioxolane-2-yl, optionally substituted aryloxy, optionally substituted 2H-tetrazole, optionally substituted pyridyloxy, and optionally substituted pyridazinyloxy.

11. (original) A compound of claim 10, wherein B is the bridging group O or *OC(=O)NR^{15}; R^{17}, R^{18}, R^{19}, R^{20}, and R^{21} are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy.

12. (original) A compound of claim 11, wherein R^2, R^3, R^5, R^6, R^7, R^{18}, R^{20}, R^{21}, R^{22}, R^{23}, R^{24}, R^{25} and R^{26} are hydrogen; R^4 and R^{19} are difluoromethyl, trifluoromethyl or trifluoromethoxy; and R^{24} is pyrid-2-yloxy or pyrimidin-2-yloxy.

13. (original) A composition containing an insecticidally effective amount of a compound of claim 1 in admixture with at least one agriculturally acceptable extender or adjuvant.

14. (original) A composition containing an insecticidally effective amount of a compound of claim 2 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claims 15-20 (cancelled)

21. (original) A composition containing an insecticidally effective amount of a compound of claim 9 in admixture with at least one agriculturally acceptable extender or adjuvant.

22. (original) A composition containing an insecticidally effective amount of a compound of claim 10 in admixture with at least one agriculturally acceptable extender or adjuvant.

23. (original) A composition containing an insecticidally effective amount of a compound of claim 11 in admixture with at least one agriculturally acceptable extender or adjuvant.

24. (original) A composition containing an insecticidally effective amount of a compound of claim 12 in admixture with at least one agriculturally acceptable extender or adjuvant.

25. (original) The insecticidal composition of claim 13, further comprising one or more second compounds.

26. (original) The insecticidal composition of claim 14, further comprising one or more second compounds.

Claims 27-32 (cancelled)

33. (original) The insecticidal composition of claim 21, further comprising one or more second compounds.

34. (original) The insecticidal composition of claim 22, further comprising one or more second compounds.

35. (original) The insecticidal composition of claim 23, further comprising one or more second compounds.

36. (original) The insecticidal composition of claim 24, further comprising one or more second compounds.

37. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 13 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

38. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 14 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

Claims 39-44 (cancelled)

45. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 21 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

46. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 22 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

47. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 23 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

48. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 24 to a locus where insects are present or are expected to be present.

49. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 25 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

50. (currently amended) A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 26 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

Claims 51-56 (cancelled)

57. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 33 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

58. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 34 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

59. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 35 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.

60. A method of controlling ~~insects~~ tobacco budworm, comprising applying an insecticidally effective amount of a composition of claim 36 to a locus where ~~insects~~ tobacco budworm are present or are expected to be present.